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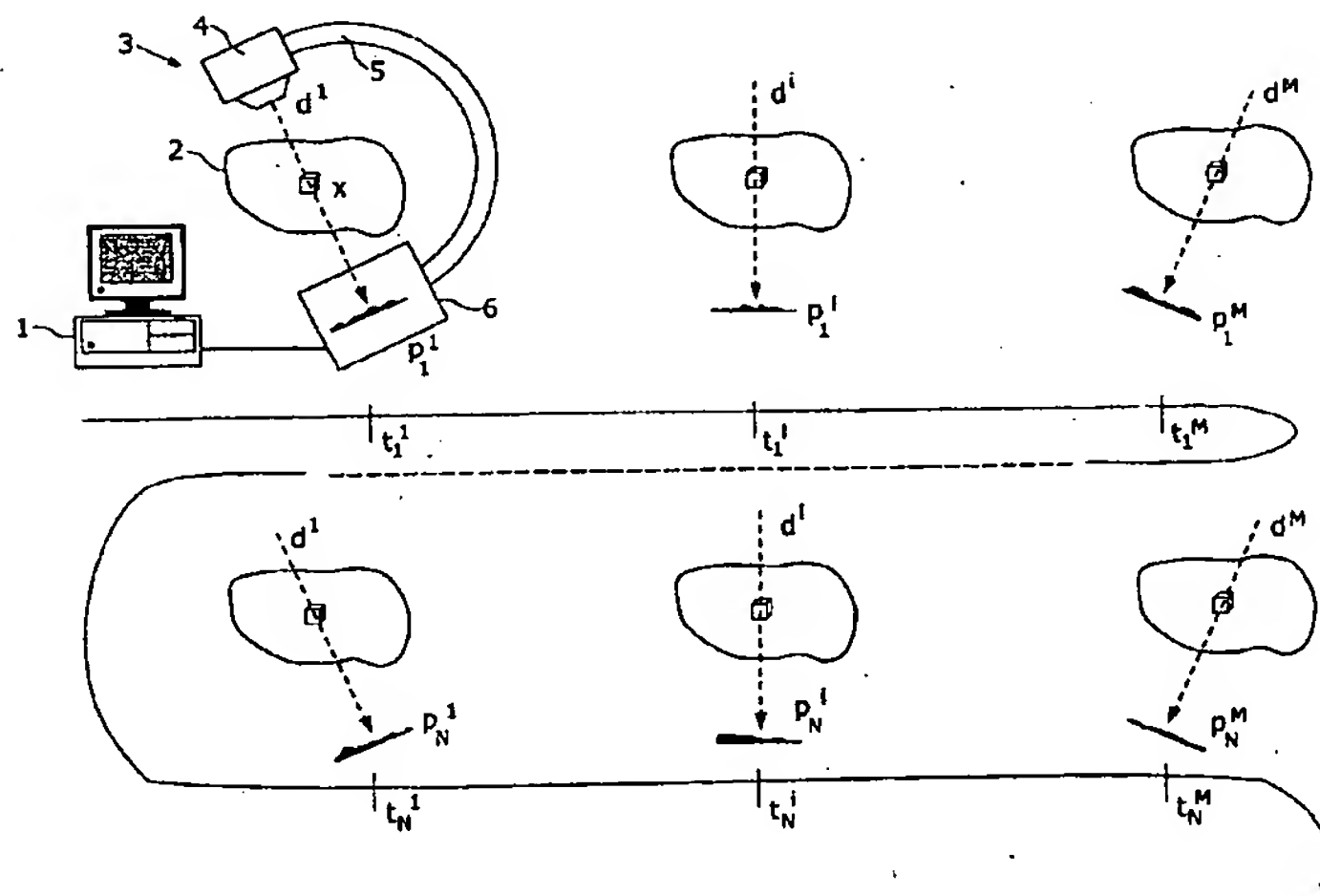
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(54) Title: APPARATUS AND METHOD FOR THE PROCESSING OF PERFUSION IMAGES



(57) Abstract: The invention relates to an apparatus and a method for the reconstruction of time-dependent cross-sectional images and may be applied for example in perfusion imaging in the vessel system (2) of a patient. According to the method, projections p_j are generated from a number M of different directions d^i and at different times t_j^i . Moreover, the time-dependent intensity function $I(x, t)$ of the reconstructed volume is approximated by a predetermined model function $I^*(a(x), t)$, wherein the unknown parameter vector $a(x)$ is estimated for each voxel x . This estimation may be done using the update functions of known reconstruction algorithms like ART for at least N projections p_j in each iteration step.

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